

ABSTRACT

A single wheel radial flow gas turbine having a single rotating wheel and a stationary shroud. The wheel has a radial flow compressor section at its inner portion and a turbine section at its outer portion. The compressor and turbine sections are located on the same side of the wheel, which is directly or indirectly coupled to a generator for absorbing the excess rotational energy. A radial flow combustor section and a nozzle section are mounted on the stationary shroud. Air flows radially through the compressor, combustor, nozzle, and turbine sections; there is essentially no axial flow component. Optionally, water may be injected radially downstream from the fuel injectors for power augmentation, NO_x reduction, and metal temperature moderation.